Plan for the Removal of Building Related Polychlorinated Biphenyls (PCBs)

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Prepared by:

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December 9, 2014

1) Introduction

NorthStar Demolition & Remediation, LP shall perform the remediation of the specified PCB-containing materials in accordance with this "Plan for the Removal of Building-Related Polychlorinated Biphenyls (PCBs), prepared by NorthStar Demolition & Remediation and dated 9th of December 2014. NorthStar will perform the Polychlorinated Biphenyls (PCB) activities in accordance all applicable local, state, and federal regulations governing PCB's within an occupational setting and understanding that unauthorized PCBs have been found in specified caulking compounds and specified associated material. NorthStar has submitted this plan and shall perform the following work activities.

2) Scope of work

The project involves the proper handling, removal and on-site temporary storage of PCB containing caulk and adjacent contaminated building material. The PCB containing caulk (approximately 13,000 lineal feet). windows and curtainwalls on all exterior elevations (approximately 41,000 square feet) and brick façade on North and South elevations (approximately 12,000 square feet) is located throughout the existing curtain wall/façade system Refer to the Project Drawings/Specifications/Hazardous Material Surveys for more specific detail.

3) Work area preparation

- Prior to initiating any of the remedial activities, the following controls will be implemented:
    - A Health & Safety Plan will be developed for specific work activities to be conducted.

- Additional notifications and plans required for the work activities will also be prepared and submitted for approval, as needed.

- Access to work areas will be limited to workers associated with the abatement project. Access to the active work area will be restricted by signage with controlled access.

- Fully equipped three stage remote decontamination units will be erected for personal hygiene.

4) Regulated area controls

➢ Engineering controls will be used to minimize fugitive emissions from the project to protect workers, the public, and the environment.

- To reduce particulate levels and exposures to airborne particulates, a combination of engineering controls (e.g. wetting, HEPA attached tools…) and personal protective equipment (PPE) will be implemented as part of the work activities.

- Ground cover (polyethylene sheeting or equivalent) will be placed along building walls and attached to the building as containment for any debris or building materials removed.

- The immediate work area will be cordoned off with “Danger Tape” and the appropriate PCB and Asbestos signage will be posted.

- Access to the work areas will be limited to workers associated with the abatement project.

5) Standard Operating Procedures

➢ <u>Caulking removal</u>

- Confirm Fall Hazard Written Plan Confirm Fall Hazard Written Plan has been approved by NorthStar Corporate Safety Director.

- Workers will wear appropriate Tyvek garments, (suits with hoods, booties, etc.), nitile gloves, and negative pressure full-face respiratory protection equipped with P-100/OV filters during all phases of the removal process.

- Inspect all lift equipment, Tie Offs, harnesses and fall protection equipment prior to using.

- Work surfaces will be misted to minimize dust during removal operations using hand sprayers.

- Workers will use only hand/power tools to remove the caulking material.

- Care will be taken to not unduly disturb/further contaminate PCB and asbestos containing caulk and associated contaminated building materials during demolition/dismantlement. The prescribed polyethylene sheeting/mast climbing work platforms will catch errant demolition debris (i.e broken glass, metal clips, etc.) generated during the removal work.

- A HEPA vacuum (with the suction placed as close to the source as possible) will be used during any manual removal/cutting of impacted materials and for clean up/decontamination purposes.

- Upon completion of the removal activities, the resultant concrete surfaces will be treated with CAPSUR PCB extraction solution.

- A third party visual inspection will be conducted. Any surfaces that do not meet the visual clearance criteria will be re-cleaned.

- Northstar will apply two layers of epoxy based encapsulating sealants (Sikagard-62) to the concrete where caulk residue may exist to prevent migration of PCB's. Refer to the attached technical data/specifications for additional information regarding the CAPSUR and Sikagard-62 products. Both products will be applied/used in accordance with their respective manufacturer recommendations.

- Workers will decontaminate their personal protective equipment utilizing alcohol wipes / CAPSUR PCB Extraction Solution (double-wash / rinse procedure) and dispose of contaminated wastes and Tyvek garments at the decontamination station.

- A wipe test will be performed by an independent consultant.

- Waste will be conveyed to ground level containers via the buckhoist.

- All waste generated during the caulking removal process will be disposed of as Mixed PCB Bulk Product and Asbestos Containing Waste. Waste will be properly manifested and legally disposed of. This is to be coordinated directly by the Owner/Designated Owners Represenative(s).

- The Waste Hauler is also to be determined by the Owner/Designated Owners Representative(s).

➢ <u>Window & Curtainwall Removal</u>

- Confirm Fall Hazard Written Plan has been approved by NorthStar Corporate Safety Director.

- Workers will wear appropriate Tyvek garments, (suits with hoods, booties, etc.), nitile gloves, and negative pressure full-face respiratory protection equipped with P-100/OV filters during all phases of the removal process.

- Inspect all lift equipment, Tie Offs, harnesses and fall protection equipment prior to using.

- The window and Curtainwall fasteners will be exposed and cut loose in a controlled manner.

- Utilizing a Brokk 180 with shear attachment to size Curtainwall where it continues at floor levels where applicable.

- Utilize a Brokk 180 with shear attachment to size window frames to manageable pieces to bring inside the building.

- A HEPA vacuum (with the suction placed as close to the source as possible) will be used during any manual removal/cutting of impacted materials and for clean up/decontamination purposes.

- Wrap contaminated window components in two layers of 6 mil poly, conveyed to ground level containers via the buck hoist and disposed of as PCB Bulk Product waste by the owner.

- Upon completion of the removal activities, the resultant concrete surfaces will be treated with CAPSUR PCB extraction solution.

- A third party visual inspection will be conducted. Any surfaces that do not meet the visual clearance criteria will be re-cleaned.

- Northstar will apply two layers of epoxy based encapsulating sealants (Sikagard-62) to the concrete where caulk residue may exist to prevent migration of PCB's. Refer to the attached technical data/specifications for additional information regarding the CAPSUR and Sikagard-62 products. Both products will be applied/used in accordance with their respective manufacturer recommendations.

- Workers will decontaminate their personal protective equipment utilizing alcohol wipes / CAPSUR PCB Extraction Solution (double-wash / rinse procedure) and dispose of contaminated wastes and Tyvek garments at the decon station.

- All waste generated during the caulking removal process will be disposed of as Mixed PCB Bulk Product and Asbestos Containing Waste. Waste will be properly manifested and legally disposed of. This is to be coordinated directly by the Owner/Designated Owners Representative(s).

- The Waste Hauler is also to be determined by the Owner/Designated Owners Representative(s).

- Exterior Brick Removal

  - Confirm Fall Hazard Written Plan has been approved by NorthStar Corporate Safety Director.

  - Workers will wear appropriate Tyvek garments, (suits with hoods, booties, etc.), nitile gloves, and negative pressure full-face respiratory protection equipped with P-100/OV filters during all phases of the removal process.

  - Inspect all lift equipment, harnesses and fall protection equipment prior to using.

  - Remove brick infill from top down, bringing material into the building.

  - Contaminated brick will be conveyed to ground level via the buckhoist and will be disposed of as Mixed PCB Bulk Product and Asbestos Containing Waste. Waste will be properly manifested and legally disposed of. This is to be coordinated directly by the Owner/Designated Owners Represenative(s).

  - Non-contaminated brick and C&D (including <1% ACM drywall and compound) will be conveyed to ground level using an enclosed chute to a dumpster in a negative pressure containment.

  - Demolition will be completed using hand/power tools to ensure that all work is done in a controlled manner.

  - A HEPA vacuum (with the suction placed as close to the source as possible) will be used during any manual removal/cutting of impacted materials and for clean up/decontamination purposes All brick will be packaged as PCB contaminated waste for disposal by the owner.

  - Upon completion of the removal activities, the resultant concrete surfaces will be treated with CAPSUR PCB extraction solution.

  - A third party visual inspection will be conducted. Any surfaces that do not meet the visual clearance criteria will be re-cleaned.

  - Northstar will apply two layers of epoxy based encapsulating sealants (Sikagard-62) to the concrete where caulk residue may exist to prevent migration of PCB's. Refer to the attached technical data/specifications for additional information regarding the CAPSUR and Sikagard-62 products. Both products will be applied/used in accordance with their respective manufacturer recommendations.

- Workers will decontaminate their personal protective equipment utilizing alcohol wipes / CAPSUR PCB Extraction Solution (double-wash / rinse procedure) and dispose of contaminated wastes and Tyvek garments at the decon station.

- Waste associated with the brick removal process will be separated as PCB Bulk Material (no less than one course of adjacent brick) and C & D (remainder). Waste will be properly manifested and legally disposed of. This is to be coordinated directly by the Owner/Designated Owners Represenative(s).

- The Waste Hauler is also to be determined by the Owner/Designated Owners Representative(s).

6) Sampling

- NorthStar will conduct the required OSHA sampling for worker protection.

- Owner will perform 3rd Party wipe sampling.

7) PCB waste containers

- All PCB waste generated during the PCB removal activities, including PPE, poly sheeting, and PCB-containing materials and contaminated debris will be disposed of as PCB Bulk Product Waste or Mixed PCB and Asbestos Containing Material Waste. All PCB waste is to be properly manifested and legally disposed of and is to be coordinated directly by the Owner/Designated Owners Representative(s). The owner's representative must sign for the disposal of the waste material when picked up by the waste transporter. Appropriate copies of all waste manifests will be kept by the owner for record-keeping purposes and confirmation of proper disposal.

- No liquid waste will be generated. We will be utilizing alcohol wipes, CAPSUR PCB Extraction Solution on rags, and the water mist will only be utilized during caulking removal.

8) Training and Certification

- A Supervisors with 40 Hour Hazardous Waste Operations Training and applicable asbestos Supervisor training and certifications will oversee all work. All workers will have at a minimum PCB awareness and Asbestos Worker certification and be instructed on the appropriate job/task specific safety protocol. In addition to the appropriate training, an initial negative exposure assessment will be performed by a third party consultant immediately upon commencement of physical demolition work. The negative exposure assessment will be used to verify actual OSHA exposure levels experienced during performance of work, and prescribed the appropriate follow-up task-specific PPE

to be utilized on the project. Where deemed appropriate, results from previous monitoring data indicating exposure levels likely to be encountered

- Occupational exposure to PCB's and the unique hazards associated with this operation will be an ongoing topic of daily toolbox talks and jobsite safety meetings throughout the course of this project.